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10/533,375	02/13/2006	David A. Mendels	78104089/N16948	4639

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Intellectual Property Dept.
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EXAMINER	
WALSH, DANIEL I	

ART UNIT	PAPER NUMBER
2887	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/533,375	MENDELS, DAVID A.	
	Examiner	Art Unit	
	DANIEL WALSH	2887	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1-12-09*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,8-13 and 16-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) *16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1-12-09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 is a detection apparatus that depends on claim 1, which is a identification device. Claim 16 does not further limit the identification device (coded layer with 3 machine readable codes in the length, width, and height directions).

Appropriate correction is required. The Examiner further notes that a restriction may be proper if the claim is rewritten into independent form.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-4, 6, and 17-18, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoobridge (US 7,185,816).

Re claim 1, Shoobridge teaches an identification device in a single coded layer, first, second, and third machine readable identification codes arranged along length, width and height dimensional axes each provided with coding elements extending along their respective

dimensional axes (abstract, which teaches encoding of colors/gray can encode information in a 3rd dimension, on a 2d barcode). The Examiner notes that "coding units" as set forth in the claim is sufficiently vague. Accordingly, as the barcode is printed, the Examiner has interpreted that the ink, at the atomic level, represents coding units (as they constitute the ink) and accordingly, as smaller than 1 micron, as understood in the art.

Re claim 2, the codes are interpreted as substantially orthogonal to each other.

Re claims 3-4, the teachings of Shoobridge have been discussed above.

Shoobridge is silent to a fourth code as claimed.

However, the Examiner notes that it is well known and conventional in the art to have varying widths of code elements, to encode data. Re claims 3-4, based on the claim language, the Examiner has interpreted that 2 or more individual bar code elements can read upon the claimed identification code, since the claims only require each identification code to have a plurality of elements (at least two). Therefore, any collection of at least 2 coding elements can be interpreted as an identification code (such as 2 bars, or 3 bars, etc). As Shoobridge teaches 2d barcodes with a 3rd dimension encoded in color, it would have been obvious that a collection of at least 2 individual elements of the barcode of Shoobridge can be interpreted as one of the claimed identification code, and hence Shoobridge can have at least 4 identification codes and even more, based on what data is being encoded. Simply put, a pair of barcode elements of Shoobridge can read on the claimed identification code. It would have been obvious to one of ordinary skill in the art to have 4 or more pairs of such barcode elements, based on what is being encoded data wise, still noting that it would have been obvious to have at least 4 pairs of elements in order to encode data, as 2d barcodes are known to encode more data than 1d

barcode, for example. As Shoobridge teaches different colors, that can be interpreted as the different physical characteristic.

Re claims 6, the teachings of Shoobridge have been discussed above.

Re claims 17-18, the Examiner notes that such limitations are drawn to the intended use of the device. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ2d 1647 (1987). It would have been obvious to use such a device for items, to provide machine readable information (for reliability, accuracy, security, etc.).

Re claim 21, the limitations have been discussed above. As the barcodes can be on the outside, they are understood to protrude and be arrayed along the article.

Re claim 22, the Examiner notes that the barcode elements vary in one or more of spacing, height/length/width dimensions, as is conventional in the art, for how barcodes are encoded/formed, as a property of barcodes, conventional in the art.

Re claim 23, the limitations have been discussed above.

Re claim 24, though silent to polymer for printing, it would have been obvious o use a polymer for expected results such as desirable print quality.

2. Claims 1-3, 6, 8-13, and 17-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Depta (US 2004/0245343).

Re claim 1, Depta teaches the limitations of claim 1 (paragraph [0008]), though a 1d/2d barcode encoded in 3 dimensions (the third being the height). As discussed above, the atomic level is interpreted as sub-micron coding units.

Re claim 2, as discussed above, the directions are orthogonal.

Re claims 8-9, Depta teaches invisible (only luminescent during excitation (paragraphs [0010] and [0014]), and that the third code (height dimensions) is physically different. This is interpreted as invisible.

Re claim 3, the teachings of Depta have been discussed above.

Depta is silent to a fourth code as claimed.

However, the Examiner notes that it is well known and conventional in the art to have varying widths of code elements, to encode data. Re claims 3, based on the claim language, the Examiner has interpreted that 2 or more individual bar code elements can read upon the claimed identification code, since the claims only require each identification code to have a plurality of elements (at least two). Therefore, any collection of at least 2 coding elements can be interpreted as an identification code (such as 2 bars, or 3 bars, etc). As Depta teaches 1d and 2d barcodes, it would have been obvious that a collection of at least 2 individual elements of the barcode of Depta can be interpreted as one of the claimed identification code, and hence Depta can be interpreted as having at least 4 identification codes and even more, based on what data is being encoded. Simply put, a pair of barcode elements of Depta can read on the claimed identification code. It would have been obvious to one of ordinary skill in the art to have 4 or more pairs of such barcode elements, based on what is being encoded data wise, still noting that it would have been obvious to have at least 4 pairs of elements in order to encode data, as 2d barcodes are known to encode more data than 1d/2d barcode, for example. Further, Depta teaches a fourth characteristic width a different physical characteristic (length, width and spacing (paragraph [0008]), which has a different characteristic when read, for example.

Re claim 6, the teachings of Depta have been discussed above.

Re claims 8 and 9, the teachings of Depta have been discussed above.

The Examiner notes Depta teaches fluorescent/luminescent materials that are possibly invisible and only luminescent when illuminated, and hence is interpreted as invisible, at any distance, unless activated.

Re claim 10, the limitations have been discussed above. Depta teaches the code on outside of an item (abstract).

Re claims 11-13, the limitations have been discussed above. Re claim 11, the individual atoms/atomic level of the ink are the individual barcode (makes up the bars).

Re claims 17-20, the Examiner notes that such limitations are drawn to the intended use of the device. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ2d 1647 (1987). It would have been obvious to use such a device for items, to provide machine readable information (for reliability, accuracy, security, etc.). Nonetheless, Depta teaches documents and other notes (abstract).

Re claim 21, the limitations have been discussed above. As the barcodes can be on the outside, they are understood to protrude and be arrayed along the article (FIG. 3).

Re claim 22, the Examiner notes that the barcode elements vary in one or more of spacing, height/length/width dimensions, as is conventional in the art, for how barcodes are encoded/formed, as a property of barcodes, conventional in the art.

Re claim 23, the limitations have been discussed above (atomic level).

Re claim 24, though silent to a polymer, the Examiner notes that the use of a polymer in order to achieve the invisible barcode is an obvious expedient in order to provide such results of an invisible barcode (visible only upon certain actuation, but normally invisible at any distance)

Re claim 25, as discussed above, the height can vary.

Re claims 26-27, 31-32 and 36-37, the Examiner notes that the method of forming the device is not germane to the issue of patentability of the device itself, and therefore his limitation is not given patentable weight. Re claim 27, the Examiner notes that the barcode is understood to be able to be applied to numerous surfaces/materials, including non IR reflecting semiconductor materials, for identification, for example.

Re claims 28-30 and 33-35, the limitations have been discussed above.

3. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Depta, as discussed above, in view of Shoobridge, as discussed above.

The teachings of Depta have been discussed above.

Depta is silent to the characteristics as claimed.

Shoobridge teaches such limitations (color).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Depta with those of Shoobridge.

One would have been motivated to do this to have additional encoding capacity.

4. Claims 24, 29, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Depta, as discussed above, in view of Urano et al. (US 20040155113).

The teachings of Depta have been discussed above.

Depta is silent to polymer for the coding unit.

Urano et al. teaches such limitations for an invisible barcode (para [0052]).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Depta with those of Urano et al.

One would have been motivated to do this in order to produce an expected result of an invisible barcode.

5. Claims 1-3, 6, 8, 9-10, 12, 13, and 17-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bawendi et al (US 20040038310).

6. Bawendi et al. teaches inventory control using nanocrystals that are arranged on an object, and hence encode data in the three directions as claimed, while not being visible due to their size (abstract and FIG. 1+, paragraph [0038]+). The Examiner has interpreted that the dots comprising code (represent data) and is arranged along axis, especially when q-dots are next to each other. Though silent to an identification code and coding units, the Examiner has interpreted that the dots of Bawendi et al. are functionally equivalent. The remaining limitations have been addressed above.

Response to Arguments

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (See PTO-892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL WALSH whose telephone number is (571)272-2409. The examiner can normally be reached on M-F 9am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Paik can be reached on 571-272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL WALSH/
Primary Examiner, Art Unit 2887